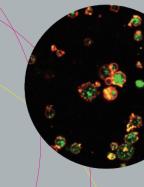
International Symposium on



"Artificial Cell Reactor Science and Technology"

5-6 April 2018,

at The University of Tokyo





Pier Luigi Luisi, ETH Zurich

Andreas Plückthun, University of Zurich

Roland Ludwig, Institute of Food Technology,

University of Natural Resources and Life Sciences

Jeff Errington,

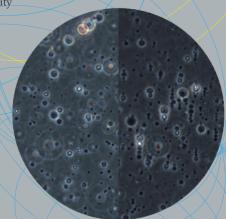
Director of the Center for Bacterial Cell Biology, Newcastle University

Michael Jewett, Northwestern University

John Glass, J. Craig Venter Institute

Akihiko Kondo, Kobe University

Mitsuhiro Itaya, Keio University



- Date: 5th (Thu) 6th (Fri) April, 2018
- Language: English (no simultaneous interpretation)
- Venue: Ito International Research Center, The University of Tokyo (http://www.u-tokyo.ac.jp/ext01/iirc/access.html)

 | Chairperson: Professor Hiroyuki Noji, ImPACT Program Manager
 | Registration Fee: Free (except for banquet)
 | Banquet: non-student \(\pm\) 7,000, student \(\pm\) 4,000





"Artificial Cell Reactor Science and Technology"

held by ImPACT Noji Program

	Day 1 (Thu, 5th April)		Day 2 (Fri, 6th April)
10:00-10:10	Opening remarks Hiroyuki Noji (JST, Japan)		Synthetic biology
	Artificial cell reactor array technology		< Chaired by Masayuki Suetsugu & Kazuhito Tabata >
	< Chaired by Hiroyuki Noji & Kentaro Miyazaki >	9:30-10:20	[Keynote] Jeff Errington (Newcastle University,
10:10-10:40	Hiroyuki Noji (University of Tokyo, Japan) Artificial cell reactor array technology for directed evolution		UK) L-form bacteria as a model for proliferation of primitive cells and artifical bioreactors
10:40-11:00	Nobuyasu Koga (Institute for Molecular Science,	10:20-10:50	Masayuki Suetsugu (Rikkyo University, Japan) Cell-free tool towards de novo genome synthesis
	Japan) De novo protein design and application to design thermostable proteins	10:50-11:40	[Keynote] John Glass (J. Craig Venter Institute, USA)
11:00-11:30	Yasuteru Urano (University of Tokyo, Japan)		Design, construction, and analysis of a synthetic minimal bacterial cell
	A library-based approach to realize intraoperative rapid imaging of tiny tumors by novel fluorogenic	11:40-13:10	Lunch
11:30-11:50	probes for aminopeptidases Nobuhiko Tokuriki (University of British Columbia, Canada)		Artificial cell (1) < Chaired by Norikazu Ichihashi & Daisuke Kiga>
	Comprehensive characterization of enzyme superfamilies toward discovery and engineering of new enzymes	13:10-14:00	[Keynote] Mitsuhiro Itaya (Keio University, Japan)
11:50-13:20	Lunch		Manipulation of bacterial genomes by BGM vector: From synthesis to activate
	Membrane protein (GPCR)	14:00-14:40	Michael Jewett (Northwestern University, USA)
	<chaired &="" by="" matsuura="" murata="" takeshi="" tomoaki=""></chaired>		Life-rebuilt in cell-free systems
13:20-14:10	[Keynote] Andreas Plückthun (University of Zurich, Switzerland) Evolving GPCRs to favorable biophysical properties:	14:40-15:00	Norikazu Ichihashi (Osaka University, Japan) Direct evolution of ribosome using artificial cell and sorting technologies
14:10-13:30	Enabling structural an functional studies Takeshi Murata (Chiba University, Japan)	15:00-16:00	(Poster session <even board="" numbers=""> / Coffee break)</even>
	Disruptive technology to create thermostabilized mutants of G-protein coupled receptors		Artificial cell (2)
14:30-14:50	Tomoaki Matsuura (Osaka University, Japan) Evolutionary engineering and characterization of		< Chaired by Yutestu Kuruma & Kazuhito Tabata >
	membrane proteins using liposome display	16:00-16:50	[Keynote] Pier Luigi Luisi (ETH Zürich, Switzerland)
14:50-15:50	(Poster session <odd board="" numbers=""> /Coffee break)</odd>		Origin of metabolism from the spontaneous overcrowding of biopolymers in liposomes
	Biomass	16:50-17:10	Kazuhito Tabata (University of Tokyo, Japan)
	< Chaired by Kiyohiko Igarashi & Hiroyuki Noji >	4-404-00	Toward reproduction of a bacterium from hybrid cell
15:50-16:20	Kiyohiko Igarashi (University of Tokyo, Japan) Enzymes degrading cellulose: From molecular mechanisms to traffic simulator	17:10-17:30	Hiroaki Suzuki (Chuo University, Japan) Unique deformation modes and material encapsulation of giant unilamellar vesicles encapsulating biomacromolecules
16:20-17:00	Roland Ludwig (University of Natural Resources and Life Sciences, Austria) Interaction of oxidoreductases during biomass	17:30-18:00	Shoji Takeuchi (University of Tokyo, Japan) Microfluidic formation of artificial cell membrane
	deconstruction	18:00-18:10	Closing remarks Hiroyuki Noji (JST, Japan)
17:00-17:50	[Keynote] Akihiko Kondo (Kobe University, Japan) Development of microbial cell factories for consolidated bioprocessing by synthetic bioengineering platform		
17:50-20:00	Banquet		

